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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,596	07/26/2001	Jun Koyama	12732-056001	7197

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EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/912,596

Applicant(s)

KOYAMA, JUN

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-7, 14-20, 22, 23, 25, 26, 28, 29, 31, 32, 34, 35, 37-42, 44 and 45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-7, 20, 22, 23, 25, 26, 28, 29, 31, 32, 34, 35, 37, 38, 44 and 45 is/are allowed.
- 6) ☒ Claim(s) 14-19 and 39-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. The amendment filed on 02/23/2004 is entered. The rejections of currently amended claims 14-19 and 39-42 are maintained. Claims 1, 2, 8-13, 21, 24, 27, 30, 33, 36, 43 are cancelled by Applicant. Previously presented claims 3-7, 20, 22, 23, 25, 26, 28, 29, 31, 32, 34, 35, 37, 38, 44, 45 are allowed.

Drawings

2. The drawings were received on 02/23/2004. These drawings are approved.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14-19 and 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al (previously cited) in view of Okuyama et al (newly cited, US 6,556,176).

As to claims 14-16, Okumura et al teaches a light-emitting device associated with a method having a plurality of pixels (CEL), at least one pixel is driven by memory cell (PM1, PM2), writing the n-bit digital image signals from the source signal line (411) into memory circuits (PM1, PM2) at a row (412) where the gate signal line is selected; reading out the n-bit digital image signals stored in the memory circuits (PM1, PM2) in each of the plurality of pixels (CEL) (see figure 21, column 24, lines 27-45).

Okumura et al fails to teach inputting the sampling pulses into latch circuits, holding the digital image signals in accordance with the sampling pulses in the latch circuits, transferring said digital image signals into source signal line by bit signal selection switches.

However, Okuyama et al teaches the driver circuit 2 comprises 4 D-FFs for each data line 3, and includes a data register 8 (801, 802 . . .) for receiving input digital data D0 to D3, a shift register 9 for outputting a shift clock SF1, SF2, . . . indicating a timing at which the data register receives data for each data line, a latch circuit 10 for latching the data captured in the data registers 8 according to a latch pulse LAT, and 4 analog switches 120, 121, 122, 123 provided for each data line 3 between a power supply line 11 for supplying a power supply voltage Vdd and the data line 3. 4 bit of output, LD0, LD1, LD2, LD3, from the latch circuit 101 for the data line 3 is input into the 4 analog switches 120, 121, 122, 123, respectively, as a control signal for controlling opening and closing of each switch (fig. 4, col. 4, lines 22-35).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the Okumura's signal driver circuit including a shift register 9, latch circuits 102, and switches 120, in view of the teaching in the Okuyama's reference because this would provide the number of input terminals of the IC can be decreased to thereby reduce the circuit scale as taught by Okuyama (col. 3, lines 33-34).

As to claim 17, Okumura et al teaches in a display period of a still picture "frame n to frame n+5", the n-bit digital image signals stored in the memory circuits are

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repeated read out to display the still picture "frame n to frame n+5", and the source signal line driver circuits is stopped (figure 25, column 26, lines 32-48).

As to claims 18, 39, 40, Okumura et al teaches the light-emitting device is an electro-luminescence display device (column 28, lines 9).

As to claims 19, 41, 42, Okumura et al reviews the light-emitting device is incorporated in portable personal computers, hand-held terminals, portable TV sets, cellular phones, electronic notebooks, game machines, etc. (column 2, lines 15-20).

Allowable Subject Matter

5. Previously presented claims 3-7, 20, 22, 23, 25, 26, 28, 29, 31, 32, 34, 35, 37, 38, 44, 45 are allowed.

A statement of reasons for the indication of allowable subject matter was shown in the previous office action filed on 10/23/2003.

Response to Arguments

6. Applicant's arguments filed 02/23/2004 have been fully considered but they are not persuasive.

In response to applicant's argument that claims 14-16 recite "transferring said digital image signals into source signal lines by bit signal selection switches." This argument is not persuasive because Okuyama et al teaches the driver circuit 2 comprises 4 D-FFs for each data line 3, and includes a data register 8 (801, 802 . . .) for receiving input digital data D0 to D3, a shift register 9 for outputting a shift clock SF1, SF2, . . . indicating a timing at which the data register receives data for each data line, a latch circuit 10 for latching the data captured in the data registers 8 according to a latch

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pulse LAT, and 4 analog switches 120, 121, 122, 123 provided for each data line 3 between a power supply line 11 for supplying a power supply voltage Vdd and the data line 3. 4 bit of output, LD0, LD1, LD2, LD3, from the latch circuit 101 for the data line 3 is input into the 4 analog switches 120, 121, 122, 123, respectively, as a control signal for controlling opening and closing of each switch (fig. 4, col. 4, lines 22-35).

For these reasons, the rejections based on Okumura et al and Okuyama et al have been maintained.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
May 4, 2004


XIAO WU
PRIMARY EXAMINER